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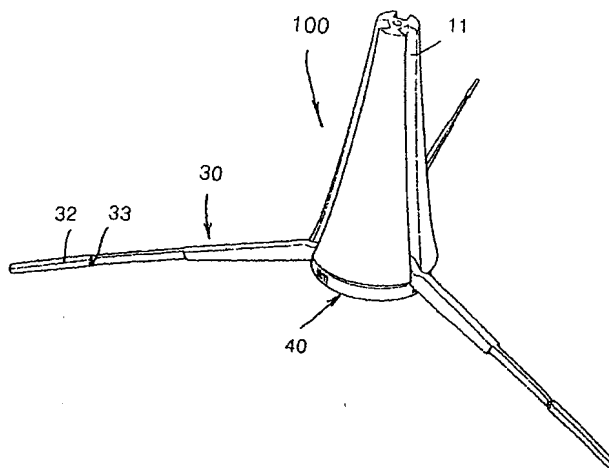
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(54) Title: A STAND FOR WIND MUSICAL INSTRUMENT



(57) Abstract: Wind musical instrument stand in accordance to the present invention, forms cone shaped body so that the horn part may be inserted, and forms multiple U-shaped grooves towards the direction of length at the body's round external part. Accordingly, this invention is configured so that feet for support are folded with convenience and ease. Accordingly, this invention is characterized by the advantage of placing wind musical instruments such as clarinet in which body is vertical in a safe manner when resting momentarily during playing. Moreover, this invention enables folding the stand into minimum volume for storage and transport and may be stored in separate case with relative ease. In particular, since feet for support may be folded into two tiers, this invention enables unfolding the stand to the maximum length at the time of use to maintain safety. At the same time, if and when folded, this invention enables maintenance of minimum volume and facilitates storage and transport.

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A STAND FOR WIND MUSICAL INSTRUMENT

BACKGROUND OF THE INVENTION

Field of the Invention:

5 This invention relates to stand for wind musical instruments such as clarinet, trumpet and others so that they shall be stored, standing up. In more detail, this invention is formed so that the above mentioned enables folding of multiple feet for support in the body of the stand. Therefore, if and when musician wishes to rest momentarily while playing wind musical instrument, simple, convenient and erected storage of musical
10 instrument is enabled. At the same time, this invention enables folding into minimum volume if and when wind musical instrument is stored for a prolonged period of time without use and if and when the above mentioned is transported. In sum, this invention pertains to wind musical instrument stand that pursues increased convenience in use.

15 Description of the Prior Art:

In general, wind musical instrument refers to the musical instrument that makes sound by vibrating the air situated in tube by blowing tube made of metal, wood, bamboo tree etc. with the mouth. The above mentioned is divided into wooden and metallic wind musical instruments, made of wooden and metallic materials, respectively.

20 Among these wind musical instruments, in case of musical instrument such as clarinet, trumpet etc that forms vertical/perpendicular part with horn part, the above mentioned shall be placed upright so that the end part of the horn part shall be placed on the floor surface to

rest during concert or practice.

In the above mentioned case, as the end part of the horn part comes into contact with the floor surface, the surface of the musical instrument maybe scratched. Therefore, the above mentioned practice is afflicted with the ability to damage expensive musical instrument. Moreover, serious problem may result if and when external pressure is exerted due to negligence since musical instrument falls easily.

In particular, given that musical instrument is expensive, the reality is such that musician handles the above mentioned with utmost care. Damage of musical instrument caused by momentary negligence is indeed an unfortunate occurrence.

Accordingly, stand for wind musical instrument that is appropriate for wind musical instrument that forms vertical/perpendicular with horn part such as clarinet, trumpet etc was recommended to eradicate the above mentioned problems.

The upper part of the above mentioned is narrow and the lower part assumes wide, cone shaped body. At the same time, the above mentioned is formed to enable feet for support to be bound by separate fixation device to enable folding and unfolding.

Accordingly, if and when the above mentioned wind musical instrument stand is used, separate fixation device shall be used at the lower part of the body in a state whereby feet for support is unfolded to bond and fix. Then, feet for support shall be used to settle onto the ground surface, enabling storage based on the form in which the horn part of the clarinet is inserted into the body of the above mentioned stand.

However, the above mentioned type of hitherto wind musical instrument stand is assembly type whereby body, feet for support, and fixation device are each comprised of separate

parts. Therefore, the above mentioned stand needs to be assembled and disassembled each and every time – indeed a major inconvenience.

Moreover, there is risk of losing related parts during storage and transport. Moreover, the above mentioned stand requires significant storage area at the time when the above mentioned is stored by storing with separate case. If and when in use after unfolding, feet for support breaks easily if and when feet for support is stepped on by negligence, and the musical instrument falls down.

SUMMARY OF THE INVENTION

10 This invention pertains to stand for wind musical instruments such as clarinet, trumpet and others so that they shall be stored in upright position. In more detail, this invention is formed so that the above mentioned enables folding of multiple feet for support in the body of the stand. Therefore, if and when musician wishes to rest momentarily while playing wind musical instrument, simple, convenient and erected storage of musical instrument is enabled. At the same time, this invention enables folding into minimum volume if and when wind musical instrument is stored for a prolonged period of time without use and if and when the above mentioned is transported. In sum, this invention pertains to wind musical instrument stand that pursues increased convenience in use.

20 The upper part of the above mentioned wind musical instrument stand(100) is narrow and is formed into wide cone-shape. When it pertains to round external part, □-shaped groove(11) is formed towards the direction of length. Body (10) that assumes binding space (10) and the binding space (12) of the above mentioned body (10) are

inserted at the lower part and fixed. At the central part, nut hole(21) is perforated. Towards the inner side of the lower part, bracket (22) with slope surface(23), support entity (2)) that projects out downward; and bracket (22) of the above mentioned support entity(20) are united with hinge axis(24). Slope surface (31) is assumed at entire surface.

5 At the latter part, feet for support(32) that fold with hinge axis(33) is bound with formed feet for support(30) into the lower part of the above mentioned support entity(20) with elastic spring(51) and binding bolt(50), which enables gyration based movement. At the center of the upper surface, binding hole(41) and support axis (42) that is perforated are formed into one. At the same time, slope projection (43) that assumes consistent slope

10 surface towards the direction of round shape's circumference and groove for accommodation(44) assume parts of adjustment/control area (40), formed into alternation/reciprocity.

BRIEF DESCRIPTION OF THE DRAWINGS

15 The aforementioned aspects and other features of the present invention will be explained in the following description, taken in conjunction with the accompanying drawings, wherein:

Fig. 1 is perspective drawing that demonstrates configuration pertaining to the

20 present invention

Fig. 2 is perspective drawing pertaining to disassembly of Fig. 1

Fig. 3 is perspective drawing that manifests feet for support of Fig. 1 after

separation

Fig. 4 is sectional configuration view of feet for support of Fig. 1 in a folded manner


Fig. 5 is sectional configuration view of feet for support of Fig. 4 in a unfolded state

Fig. 6 is configuration view that manifests feel for support pertaining to the present invention

Fig. 7 is the flat surface configuration view that manifests parts of adjustment/control area pertaining to the present invention

Fig. 8 is sectional configuration view of Fig. 7's a-a line.

<Explanation on symbol pertaining to key parts of Fig.>

100:main body	10:body
11:[]-shaped groove	12:binding space
20:support entity	21:nut hole
22:bracket	23:slope surface
24:hinge axis	30:feet for support
31:slope surface	32:feet for support
33:hinge axis	40:parts of adjustment/control area
41:binding hole	42:support axis
43:slope projection	44:groove for accommodation
50:binding bolt	51:elastic spring

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Since this invention was developed to address the above mentioned problems, the purpose of this invention entails in providing wind musical stand that supports
5 wind musical instrument with utmost safety and convenience while resting during concert or practice.

Another purpose of this invention is to form the body of the above mentioned wind musical instrument stand and feet for support as one to enable easy and convenient unfolding of feet for support at the time of use. Moreover, the purpose of this invention
10 entails provision of wind musical instrument stand that facilitates folding of stand into minimum volume at the time of storage and transport to increase convenience of use.

To achieve the above mentioned purposes, wind musical instrument stand of this invention provides wind musical instrument stand of new concept that forms body and feet for support into one.

15 In other words, the present invention's wind musical instrument stand is comprised of narrow upper part, and cone-shaped lower part. When it pertains to round external part, U-shaped groove(11) is formed towards the direction of length. Body (10) that assumes binding space (10) and the binding space (12) of the above mentioned body (10) are inserted at the lower part and fixed. At the central part, nut hole(21) is perforated.
20 Towards the inner side of the lower part, bracket (22) with slope surface(23), support entity (2)) that projects out downward; and bracket (22) of the above mentioned support entity(20) are united with hinge axis(24). Slope surface (31) is assumed at entire surface.

At the latter part, feet for support(32) that fold with hinge axis(33) is bound with formed feet for support(30) into the lower part of the above mentioned support entity(20) with elastic spring(51) and binding bolt(50), which enables gyration based movement. At the center of the upper surface, binding hole(41) and support axis (42) that is perforated are formed into one. At the same time, slope projection (43) that assumes consistent slope surface towards the direction of round shape's circumference and groove for accommodation(44) assume parts of adjustment/control area (40), formed into alternation/reciprocity. Since this invention is formed into one item, the above mentioned is characterized by ease of use and storage, mobility and ensures safety during use since feet for support unfolds to the maximum length configuration and reaction of invention

The following is detailed explanation pertaining to this invention in accordance to the figures, attached with recommended actual examples.

Attached Fig. 1 or Fig. 3 depicts entire structure of this invention in detail. Among the figures, symbol 100 presents the main body of the wind musical instrument stand in accordance to the present invention.

The above mentioned main body(100) is generally comprised of support entity (2) that is bound to cone-shaped body(10) and the above mentioned body(10), feet for support(30) that enables folding by union into three directions on the above mentioned support entity(20), and parts of adjustment/control area(40) that enables locking and unlocking of feet for support(30) based on screw binding into the lower part of the above mentioned support entity(20).

The present invention's wind musical instrument stand is comprised of narrow

upper part, and cone-shaped lower part. When it pertains to round external part, [□]-shaped groove(11) is formed towards the direction of length. Body (10) that assumes binding space (10) and the binding space (12) of the above mentioned body (10) are inserted at the lower part and fixed.

- 5 At the above mentioned time, the reason that the above mentioned body(10) is formed into cone shape is to enable support by facilitating insertion of wind musical instrument's horn part, comprised of body such as clarinet, trumpet etc into vertical/perpendicular position.

Moreover, support entity(20) of round shaped board type of shape is inserted and bound into the above mentioned body(10)'s lower part binding space(12) to fix as one in
10 order to support feet for support(30).

The above mentioned support entity(20) is perforated with net hole (21) that is bound by screw onto the parts of adjustment/control area (4), below mentioned at the central part. At the lower part, bracket (22) that projects downward is each formed into one towards three direction by forming two into one group. In the above mentioned bracket(22), slope
15 surface (23) that assumes consistent sloped angle towards the inner surface is formed. At the same time, feet for support(30) is united with hinge axis(24).

At the above mentioned time, the above mentioned support entity(20) is inserted into the binding space (12), formed on the lower part of the body(10) and bound and fixed with heat union method. Installation groove(25) where feet for support (3) are inserted is formed
20 between each bracket (22) that is comprised onto one group with two.

The above mentioned installation groove(25) enables easy folding of feet for support (30) by coinciding with body's [□]-shaped groove(11).

Moreover, as mentioned above, front of the above mentioned feet for support(30) is united to the support entity(20)'s bracket(22) in terms of hinge axis(24). The above mentioned is used as the point of support to folding into the inside of the body(10)'s □-shaped groove(11) via installation groove(25). At front, slope surface (31) that coincides with bracket(22)'s slope surface(23) of slope is formed. At the latter part, feet for support(32) is united with hinge axis(33).

The above mentioned feet for support(32) is configured so that the above mentioned may change the length of the feet for support(30). In other words, the configuration enables folding or unfolding of hinge axis(33) into the point of support. If and when folded, complete insertion is enabled within the body(10)'s □-shaped groove(11). If and when unfolded, safety is maintained by expanding the length to the maximum.

At the lower part of the above mentioned support entity(20), parts of adjustment/control area(40) is bound with separate binding bolt (5) to enable gyration based movement, enabling locking and unlocking of feet for support(30).

The above mentioned parts of adjustment/control area(40) is formed round shape. At the central part, support axis (42) that is perforated into binding hole(41) is formed so that the above mentioned is projected upward in one. At the same time, three slope projections (43) are each formed by projecting outward in consistent distance along direction of round shape's circumference, centered on support axis(42).

Groove for accommodation(44), accommodated by inserting front of feet for support(30) that folds result among them since slope projection (43) is each formed into three directions in same distance. Moreover, slope projection(43) assumes sloped angle that is comparable

to that of slope surface(23)(31), formed on the above mentioned bracket(22) and feet for support(30).

Elastic spring(51) is bound on the binding bolt (50) that bounds the above mentioned parts of adjustment/control area(40), enabling elastic gyration based movement
5 activation of parts of adjustment/control area(40). In other words, elastic spring(51) is inserted between parts of adjustment/control area(40)'s lower part and binding bolt(50), and is closely attached onto the lower part of the support entity(20) with the parts of adjustment/control area(40) due to own elasticity.

10 Accordingly, the present invention, comprised as mentioned above, forms perpendicular position with the main body of musical instruments such as clarinet, trumpet etc, and may be used appropriately with the wind musical instrument that can be lifted upright by settling the end part of the horn part with the ground surface.
Moreover, the present invention's stand(100) maybe be used folded if and when not in use,
15 and may be used unfolded at the time of use since body(10) is comprised of numerous feet for support(30) that can be folded.

First, attached Fig. 4 demonstrates the state whereby the present invention's stand(100) is folded into minimum volume to facilitate storage and transport.

In the above mentioned case, feet for support (32) are each folded to feet for support(30).

20 At a state when minimum length is maintained, folding into each part of body(10)'s □-shaped groove(11) is enabled, maintaining state of insertion. Therefore, minimum volume is maintained.

At the above mentioned time, parts of adjustment/control area(40) maintains unlocking state by turning into one direction. Therefore, folding state is accommodated by inserting feet for support (3) into groove for accommodation(44).

On the contrary, attached Fig. 5 shows the state of unfolding needed to use the
5 wind musical instrument stand(100).

In the above mentioned case, if and when feet for support (30) is each unfolded from the body (1)) at a state when the above mentioned is folded as above mentioned, feet for support(30) unfolds to the maximum length with the hinge axis(24)(33) as the point of support.

10 If and when parts of adjustment/control area(40) is reverted to the state of locking at a time when feet for support (30) is unfolded, that is, if and when slope projection (43) of parts of adjustment/control area(40) is turned so that the above mentioned coincides feet for support(30) and bracket(22)'s slope surface(23)(31), then the above mentioned feet for support(30) is fixed at the unfolded state without fluctuation.

15 At the above mentioned time, the above mentioned feet for support(30), bracket(22), and parts of adjustment/control area(40)'s slope projection(43) each assume comparable slope surface. Therefore, feet for support(30) is locked without fluctuation.

If and when stand(100) is settled onto the ground surface at the above mentioned state, the stand (100) is stable due to the three-feet based feet for support(30). Therefore, if and
20 when wind musical instruments such as clarinet etc. Are placed on the ground during rest, safety is ensured by placing the end part of the horn part upright as if inserting the body (10).

On the other hand, if and when feet for support (3) is stepped on or other materials

fall onto the feet for support (3) due to negligence while at the above mentioned support, shock is mitigated by elastic spring (51) since the above mentioned feet for support(30) is supported by parts of adjustment/control area(40). Therefore, damage to musical instrument or feet for support(30) is prevented, and if and when the power exerted is
5 mitigated, the above mentioned returns to the original position by the ability of elastic spring(51), ensuring safety.

On the contrary, if and when the present invention's wind musical instrument stand(100) is subject to storage or transport, then turn the parts of adjustment/control area(40) so that the groove for accommodation(44) will be placed at the support
10 entity(20)'s bracket(22) and feet for support(30). Then, fold feet for support(30)'s feet for support(32) within body(10)'s □-shaped groove(11).

Likewise, if and when all of each feet for support(30) are folded, the main body of the stand(100) is maintained at the size of the body(10), maintaining minimum volume. Therefore, convenient storage and transport are enabled by storing in separate case.

15

WHAT IS CLAIMED IS:

1. When it pertains to the invention that enables storage of wind musical instruments such as clarinet, trumpet in upright position,
- 5 The above mentioned wind musical instrument stand(100) is the wind instrument stand characterized by; narrow upper part, and cone-shaped lower part. When it pertains to round external part, [U]-shaped groove(11) is formed towards the direction of length. At the lower part. Body (10) comprises binding space(12);
- The above mentioned is inserted into the binding space (10) of the above mentioned
- 10 body(10) and fixed as one. At the central part, nut hole(21) is perforated, and the support entity (20) whereby bracket (22) that assumes slope surface (23) towards the inner side projects downward at the lower part;
- Bracket (22) of the above mentioned support entity(20) are united with hinge axis(24).
- Slope surface (31) is assumed at entire surface. At the latter part, feet for support(32)
- 15 that fold with hinge axis(33) is bound with formed feet for support(30) into the lower part of the above mentioned support entity(20) with elastic spring(51) and binding bolt(50), which enables gyration based movement. At the center of upper surface, union is formed with support axis (42) that is perforated with binding hole(41). At the same time, slope projection (43) that assumes consistent slope surface towards the direction of round
- 20 shape's circumference and groove for accommodation(44) assume parts of adjustment/control area (40), formed into alternation/reciprocity.

FIG.1

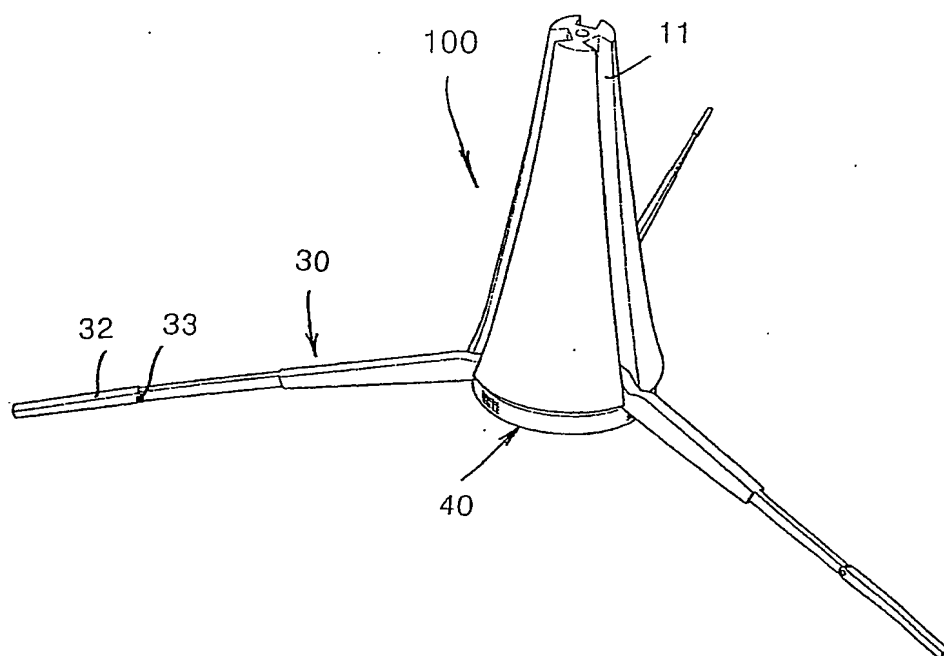


FIG.2

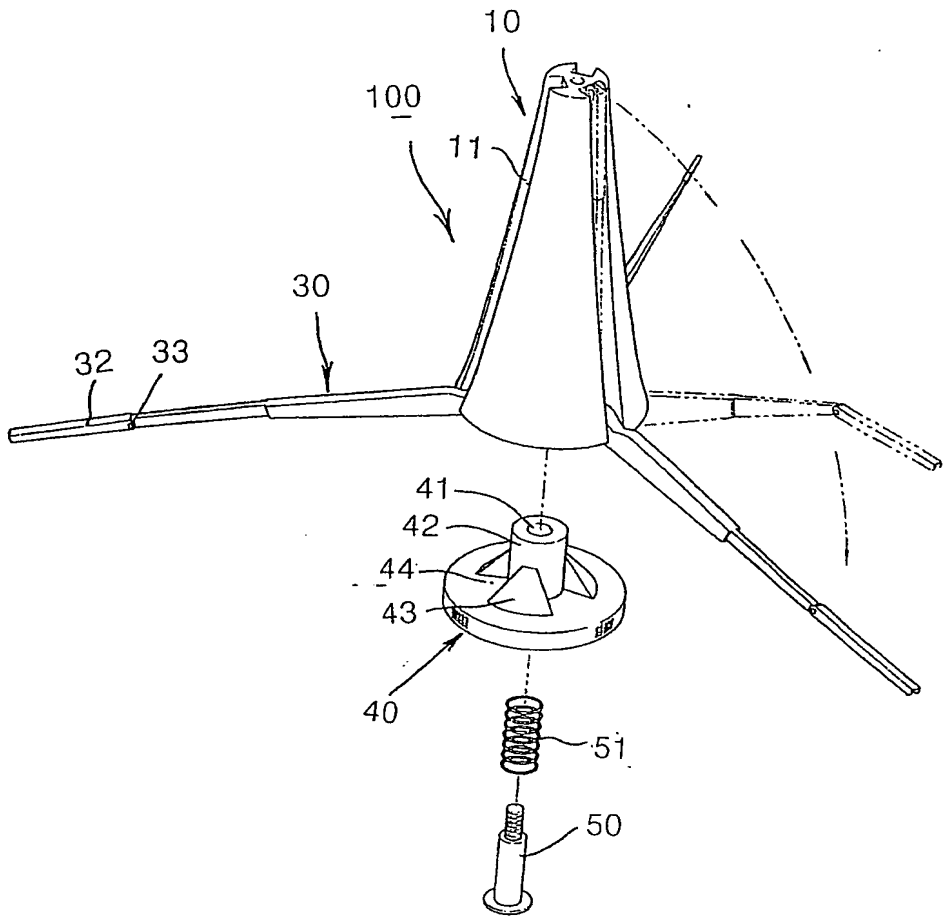


FIG.3

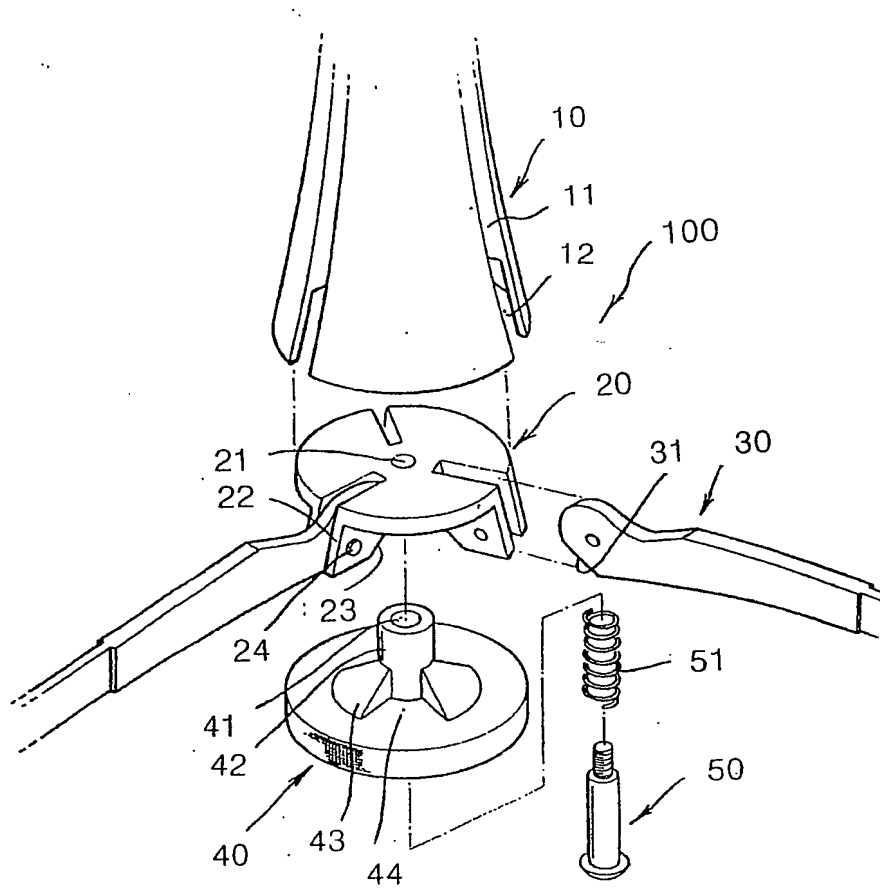


FIG.4

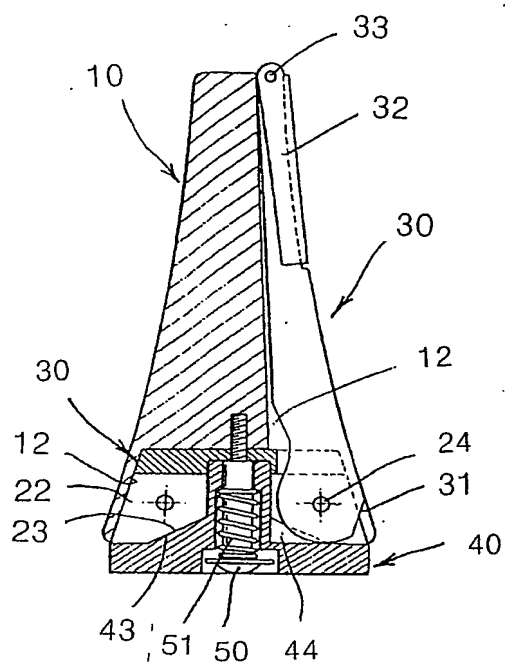


FIG.5

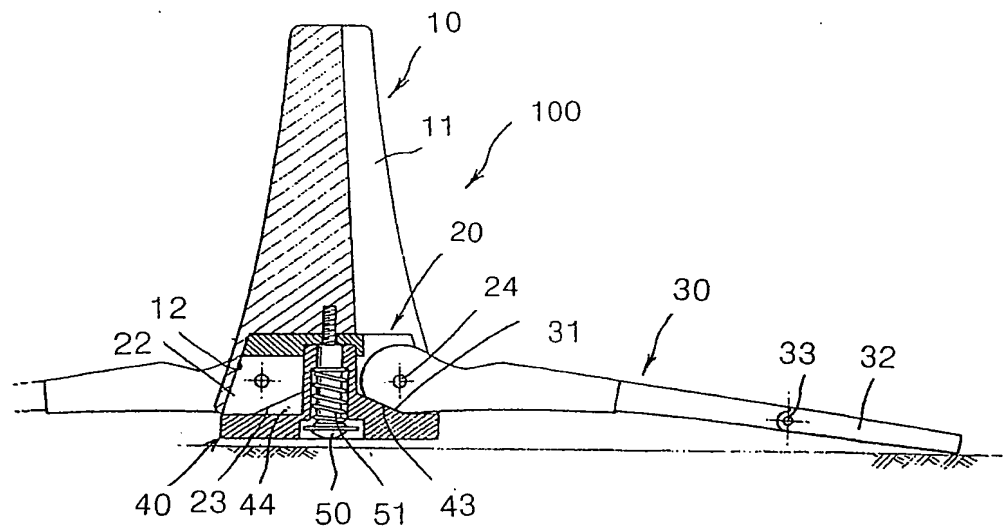


FIG. 6

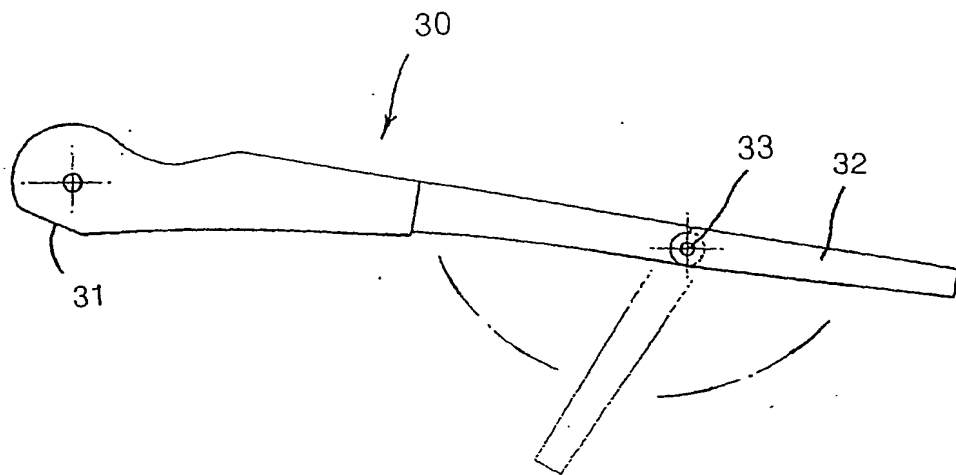


FIG. 7

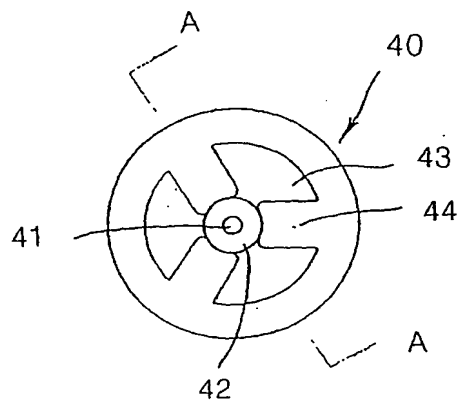
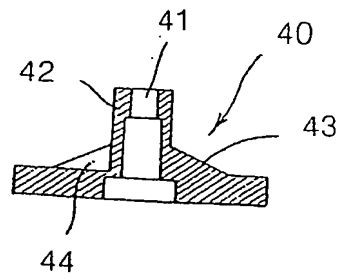


FIG.8



INTERNATIONAL SEARCH REPORT

 International application No.
PCT/KR03/00928
A. CLASSIFICATION OF SUBJECT MATTER

IPC7 G10G 5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G10G 5/00

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 404 182 A (Allsop, Inc) 4 OCTOBER 1983 See the whole document	1
A	DE 42 05 143 C1 (Konig & Co KG) 4 MARCH 1993 See the whole document	1

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

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Date of the actual completion of the international search

22 AUGUST 2003 (22.08.2003)

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR03/00928

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4407182 A	04-10-83	GB 2107503 B2 FR 2514538 B1 DE 3237420 C2	06-02-85 06-03-87 04-04-85
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